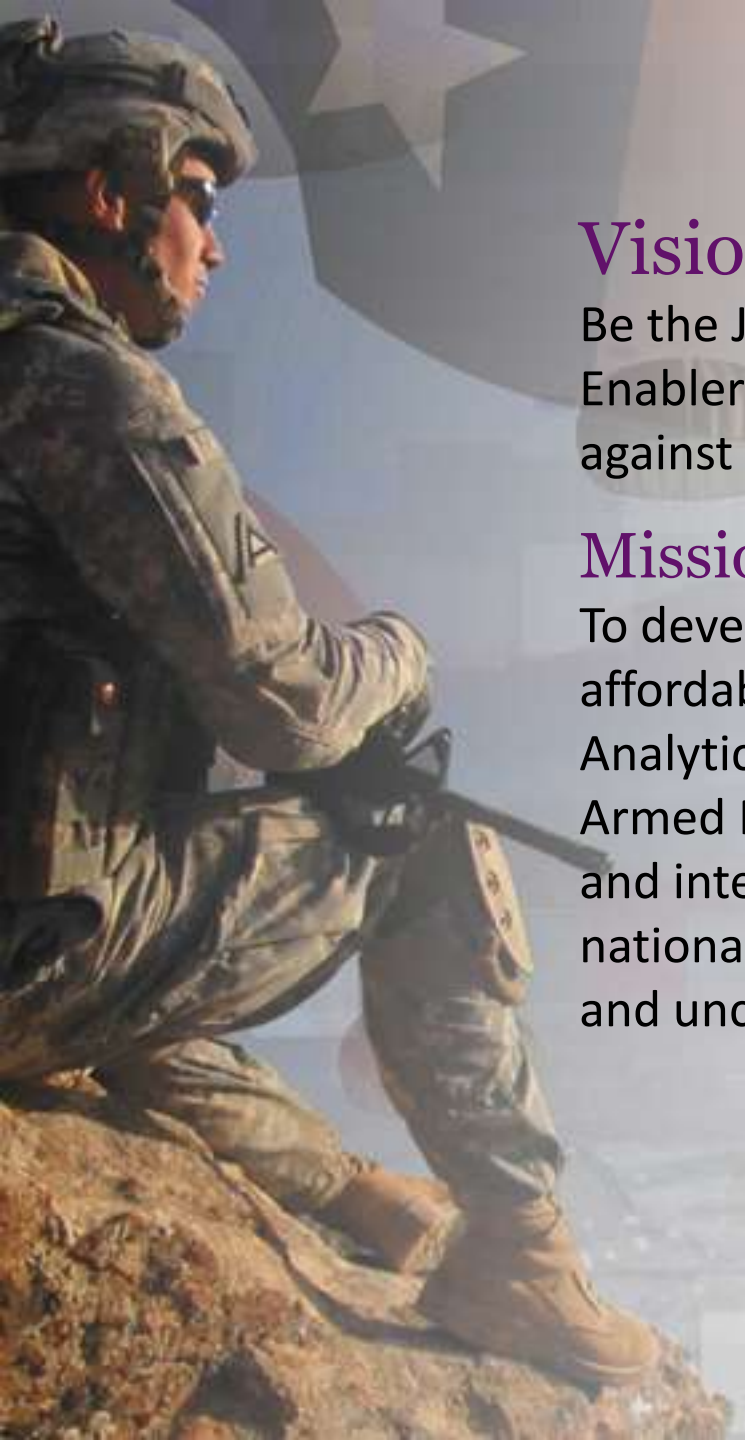
Guardian Overview



Our Vision & Mission

Vision

Be the Joint Integrated Force Protection and Response Enabler for Warfighters and Homeland Defense against Threats and All Hazards.

Mission

To develop, test, produce, field and sustain timely, affordable Joint Integrated Force Protection, CBRNE Analytics and Response Capabilities to protect our Armed Forces, the American People, and U.S. assets and interests at home and abroad from threats to national security in the face of a changing, complex and uncertain global environment.

JPEO-CBD and JPMG Organizational Lay down

Joint Program Executive Office
for Chemical and Biological Defense (JPEO-CBD)

Joint Project Manager Guardian (JPMG)

COL James Choung
Joint Project Manager
Guardian
410.417.3593
james.k.choung.mil@mail.mil

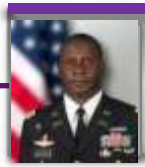
Mr. Donald Buley
Deputy Joint Project Manager
Guardian
410.417.3309
donald.c.buley.civ@mail.mil

Mr. Kurt Bielefeldt
Director,
Operations
410.417.3307
kurt.o.bielefeldt.civ@mail.mil

Mr. William Matthews
Acting Director,
Resource Management
410.417.3311
william.e.matthews40.civ@mail.mil

Mr. Michael Trzeciak
Director,
Engineering & Acquisition
410.417.3339
michael.j.trzeciak.civ@mail.mil

Ms. Karen House
Director,
Science, Technology, Strategy Initiatives
410.417.3308
karen.m.house.civ@mail.mil



LTC Keith McGuire
Director,
Agile Acquisition and Logistics
410.417.3413
keith.g.mcguire.mil@mail.mil

LTC Thomas Nguyen
Joint Product Manager
Force Protection Systems
703.704.2416
thomas.h.nguyen.mil@mail.mil

LTC Sean O'Neil
Joint Product Manager,
CBRNE Analytics & Response Systems
410.436.8930
sean.s.oneil.mil@mail.mil

Mr. Andre Kirnes
Product Director,
Emergency Management
Modernization Program
410.417.3416
andre.c.kirnes.civ@mail.mil

Joint Product Managers and Product Director

JPdM Force Protection Systems

Provides force protection capabilities to installations and deployed forces:

- Integrated Tactical Force Protection
- Personnel and Cargo Explosive Inspection Systems
- Automated Installation Entry
- Installation Intrusion Detection
- Unattended Sensors for Early Warning
- Semiautonomous Robotic Surveillance

PD Emergency Management Modernization Program

Provide Army Installations with:

- Automated Telephone Notification System
- Network Alerting Systems
- Enhanced 911

JPdM CBRNE Analytics & Response Systems

Provides DoD WMD Response and CBRNE Units laboratory, detection and protection capabilities:

- Advanced Analytics
- Communications
- COTS LCM across Portfolio
- Survey/Monitoring Integration for 20th CBRNE CMD
- IED emplacement and tunnel detection

Guardian Mission Space

JPdM Force Protection Systems
Provides force protection capabilities to installations and deployed forces

PD Emergency Management Modernization
Program Provides Army Installations with Mass Warning Notification & Enhanced 911 Capabilities

JPdM CBRNE Analytics & Response Systems
Provides DoD WMD Response & CBRNE Units laboratory, detection & protection capabilities

	Early Warning & Detection	Response	Consequence Management
Installation	Automated Installation Entry Installation Intrusion Detection Semiautonomous Robotic Surveillance	Automated Telephone Notification System Network Alerting Systems Enhanced 911 Personnel Protection Equipment Mass Casualty Decontamination All Hazards Incident Site Communications	Advanced Analytics
Tactical	Personnel and Cargo Explosive Inspection Systems Unattended Ground Sensors Entry Control IED Emplacement & Tunnel Detection CBRNE Survey	Integrated Base Defense/ Joint Defense Operations Center	Advanced Analytics CBRNE Monitoring

Enabler for Warfighters and Homeland Defense Providing Joint Integrated Force Protection and CBRNE Advanced Analytics & Response Capabilities Against Threats and All Hazards

Guardian Portfolio

JPdM FPS

Automated Installation Entry (AIE)

Integrated Commercial Intrusion Detection System (ICIDS)

Entry Control Point (ECP)

Linear Detection System (LDS)

Rapid Reaction Tunnel Detection (R2TD)

Rapid Deployment Integrated Surveillance System (RDISS)

Non-Intrusive Inspection Systems (NIIS)

Hard Impact Culvert Denial (HI/CD)

Joint Defense Operations Center (JDOC) Integration

Counter Bomber (CB)

Battlefield Anti-Intrusion System (BAIS)

Lighting Kit, Motion Detector (LKMD)

Combat Outpost Surveillance Force Protection System (COSFPS)

Force Protection Suite (FP Suite)

JPdM CBRNE A&RS

Unified Command Suite (UCS)

ADVON Comms Packages

Medical PPE (COTSMOD Program)

Colorimetric Reconnaissance Explosives Squad Screening (CRESS)

Mass Casualty Decontamination Kit

CBRN Assessment (Recon) Kit

Search & Rescue Kit

Common Analytical Laboratory System (CALS)

CBRNE Mobile Expeditionary Labs (CMEL)

Analytical Laboratory System (ALS)

PD EM2P

Enhanced 911 (E911)

Mass Warning Notification System

Guardian Theater Force Protection Capabilities

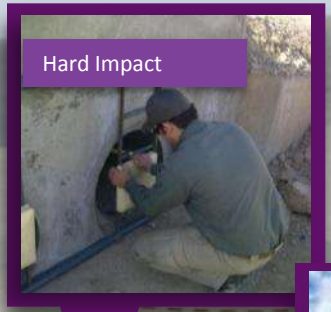
UNCLASSIFIED

Subtle Madness

Counter Bomber

Non-Intrusive Inspection Systems (NIIS)

Entry Control Point (ECP)



Hard Impact

Combat Outpost Surveillance Force Protection Systems (COSFPS)

Linear Detection System

Rapid Reaction Tunnel Detection (R2TD)

Force Protection Suite (FPS)

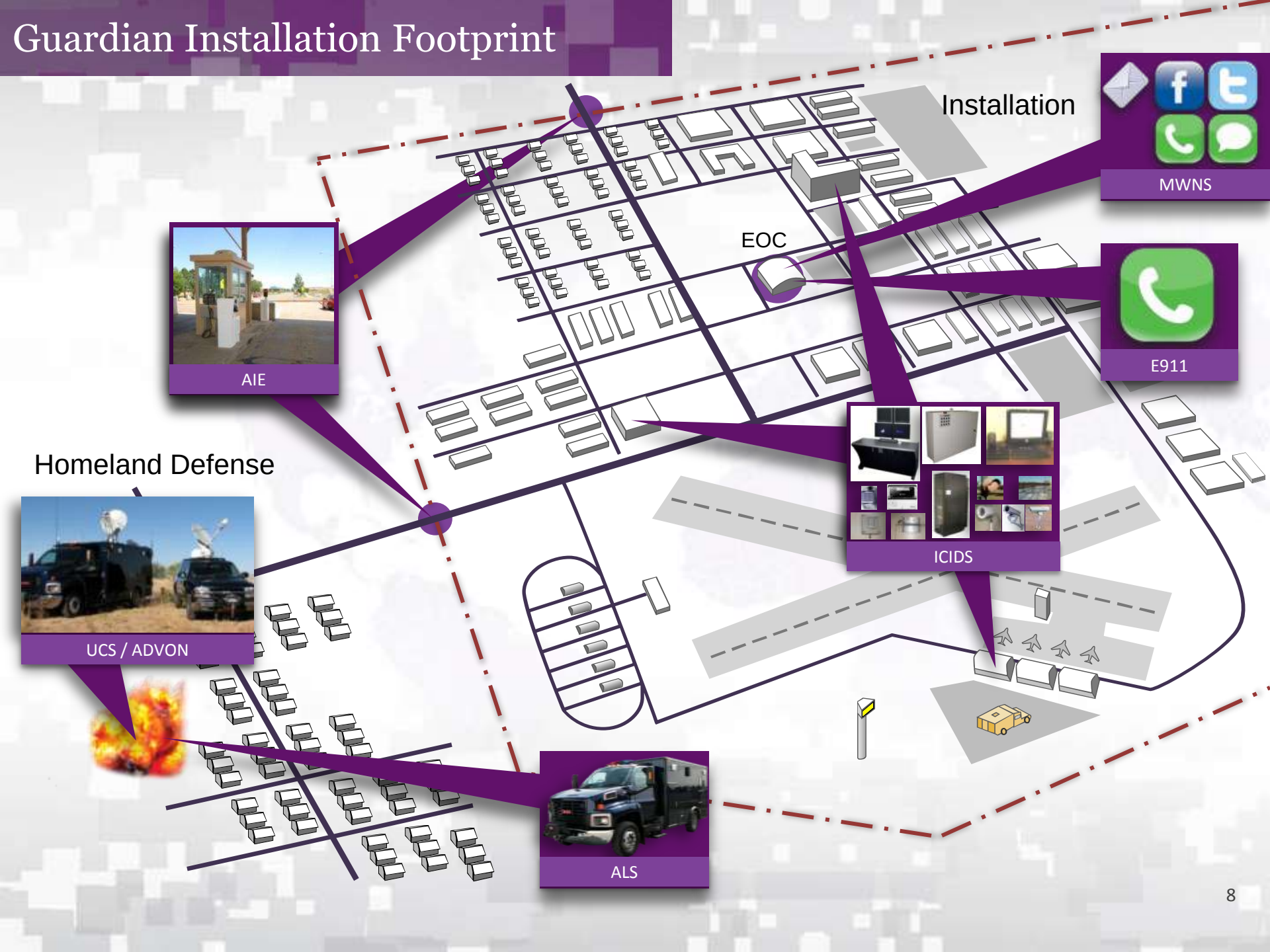
Battlefield Anti-Intrusion System (BAIS) BAIS – Part of FP Suite and COSFPS

Lighting Kit, Motion Detector (LKMD) – TOE Item of Equipment

Rapid Deployment Integrated Surveillance System (RDISS)

Joint Defense Operations Center (JDOC)

Guardian Installation Footprint



Guardian DoD Response Support

Detection, ID, Analyze
Advise
Monitor

3-6 Hours
Civil Support Team (CST)

Emergency Med	Search & Extraction
Command & Control	Decon

6-12 Hours
CBRNE Enhanced Response Force Package (CERFP)

Security	Emergency Med
Command & Control	CBRN Assessment
Search & Extraction	Decon

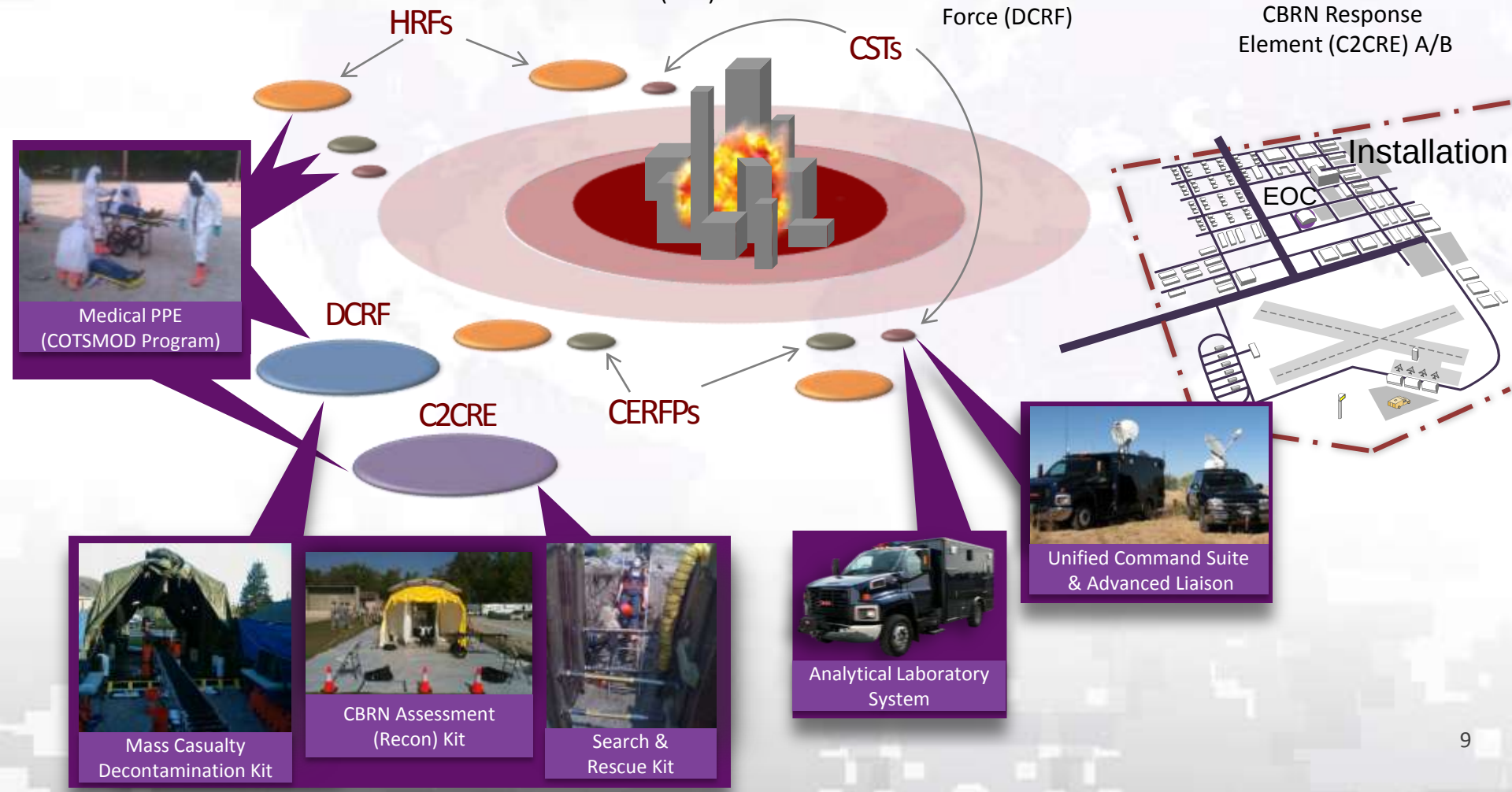
12-24 Hours
High Readiness Force (HRF)

Air CASEVAC	Air MEDEVAC	Aviation Lift
Command & Control	CBRN Assessment	Emergency Med
Search & Extraction	Decon	Level II & III Medical
Engineering	Security	Surgical Med
Logistics	Transport	Ground MED / EVAC

12-24 Hours
Defense CBRNE Response Force (DCRF)

Command and Control	Logistics
CBRN Assessment	Transport
Search & Extraction	Engineering
Decon	Security
EmergencyMed	Level II Med

12-24 Hours
Command & Control CBRN Response Element (C2CRE) A/B



Pending Requirements

	Requirement	Type	HQDA Approval	Current Status	Office
Drafted	Tactical Security Systems (TSS)	JCIDS	SEP 14	In JROC staffing	JPdM FPS
	Squad Portable Entry Control Kit (SPECK)	JCIDS	DEC 15	Adjudicating Comments DASC reclama during 1 star staffing	JPdM FPS
	Base Camp Entry Control (BCEC)	JCIDS	SEP 15	Draft	JPdM FPS
	Base Alert System (BAS)	JCIDS	SEP 15	Draft	JPMG
Working	Computer Aided Dispatch (CAD)	DBS		Draft	JPMG
Planned	Advanced Unit Perimeter Security Sensor (AUPSS) (BAIS 2)	JCIDS	FY16	Not Drafted	JPdM FPS
	Advanced Expeditionary Security Illumination System (AESIS) (LKMD 2)	JCIDS	FY16	Not Drafted	JPdM FPS
	Common Analytical Laboratory System Capability Production Document	JCIDS		Not Drafted	JPdM CBRNE A&RS
	Unified Command Suite Increment 2	JCIDS		Not Drafted	JPdM CBRNE A&RS

JCIDS – Joint Capabilities Integration & Development System

DBS – Defense Business System

Force Protection as a System

- Information management becomes the driver vice an individual sensor
- Networking allows the integration and fusion of disparate sensor data to provide a more holistic view and understanding of single and multiple events – supports a "Common Operating Picture"
  - Supports the integration of Chemical and Biological sensors into a common framework
  - Utilize existing equipment /sensors to further extend/complement the CB sensors
  - Enhance sensor flexibility, scalability and tailorability, while reducing system cost and complexity through the employment of a distributed sensor array
- Allows for more effective and timely hazard detection and predication
  - Reduces false alarms (system view vice a single sensor view)
  - Can more accurately predict areas of contamination supporting more effective response with limited resources
- Supports Risk Based decision making

JPMG's Strategic Focus

- **Integration** of other sensors, to include Chem/Bio with Force Protection/Physical Security where appropriate to create an array of protection with orthogonal sensors
  - Leverage **physical security and force protection capabilities** (CONOPS, technologies and information management), to better support the integration of CBRN capabilities and potentially leverage existing FP capabilities and efforts to provide initial chemical, biological and radiological protection, detection, warning and response capabilities.
  - Ensure the integration of threat detection/identification capabilities from the tactical level up to large Forward Operating Bases
  - Leverage a **Common Information Management Architecture** across all system requirements, providing plug and play across the mission space
- Leverage and partner with **other agencies** doing similar or related work
- Coordination with those writing **Requirements Documents** as well as the **S&T**
- Leverage other developmental opportunities (SBIR, STTR work)

Provide a layered and integrated capability across the mission space and operational timelines

Why Integration

- *Enhance Force Protection capabilities across a complex operational mission space by better exploiting technology and integration opportunities.*
  - The Army's physical security and Force Protection programs provide a layered protection capability over a broad mission space that includes installations, deployable (i.e. forward operating bases) and tactical environments.
  - These capabilities comprise a layered protection capability that includes entry control, explosive and contraband detection, surveillance, physical security, detection, identification, response and information management. Most of these capabilities are present upon initial deployment through the life of the mission.
  - FP and CBRN mission spaces directly overlap and their capabilities are found on fixed installations, as part of deployable packages and as standalone tactical capabilities. These mission spaces have common operational threads that tie them together.
  - Force Protection missions and requirements should be considered and analyzed more holistically to identify these common mission threads which would support the development of more comprehensive and integrated operational requirements and technical solutions.

Science and Technology Activities

- We are looking at developing "Dual Use" technologies to provide an integrated detection capability at the component level
- Leveraging the continuum of opportunities starting with early S&T, to Advanced Technology Demonstrations and through ongoing Interagency Collaborations
- We have established a Working IPT with the S&T labs (ECBC, ARDEC, AMERDEC and ERDEC) and our Requirements Generators to better ensure smooth transitions of products
- Working to build a more realistic 30 year plan

SBIR Benefits to JPMG & JPEO-CBD

- JPMG working with ECBC on several SBIR projects in order to:
  - Generate cost savings yet still achieve acquisition and life cycle cost goals
  - Capitalize on the innovation and agility of small businesses
  - Enhance existing capabilities through the insertion of technology enablers for deployed systems
  - Mitigate risk in developmental or existing systems by employing SBIR projects during the Technology Development Phase
    - reduce technology risk
    - enhance competitive prototyping opportunities
    - identify the appropriate set of technologies to be integrated into a full system.
  - Address capability gaps and meet challenging performance requirements

Thermal Imaging

- Develop signal processing algorithms and software that can be used with existing thermal infrared cameras.
- Feasibility demonstration of camera agnostic software to do aerosol detection using existing COTS LWIR security cameras.

- MESH, Army SBIR III, **Chem Bio Threat Vision (CBTV)**, MESH (Title is misleading, the contracted effort is for the ATD TIDAMAS to refurbish existing IR cameras, upgrade with software for autonomous detect, alarm, GPS track aerosol release event. DTRA Funded thru ATD TIDAMAS)
- PSI, Army SBIR I, **Thermal Bioaerosol Cloud Tracking with Bayesian Classification**
- MESH, Army SBIR I, **Thermal Infrared Detection of Aerosolized Bacterial Spores**

Reduce Sensor Size, Weight, Power(SWaP) and Cost

- Identify and develop approaches to reducing costs of sensor technologies such as data compression, lower detector fabrication methods, cheaper sensor parts (no moving parts)
- Technical Reports of innovative engineering designs and vendor test data for lower SWAP/Cost sensors.

- Lower cost detectors (for sensor systems)
  - Brimrose, STTR II **Colloidal Quantum Dots**
  - SRICO , STTR PII **Narrowband Absorber**
  - Sivanathan Labortaories, STTR II, **Colloidal Quantum Dot Focal Plane Array (CQD FPA)**

- Reduce SWaPsensors
  - PAT, SBIR II, **Standoff sensor using Lenslets**
  - QuantaSpec, SBIR II **Wollaston Prism**
  - Omega Optics , CBD SBIR PII, **Monolithic spectrometer on a chip**
  - PSI SBIR II **Monolithic Integrated-Optic TDLAS** (Tunable Diode Laser Absorption Spectroscopy)

- **These projects are intended to feed ATDs: GOTM-B, JUPITR, TIDAMAS**

Current JPMG S&T Projects and Opportunities

Project	Lead Agency	Targeted Program	ROI
Transatlantic, Collaborative Biological Resiliency Demonstration (TaCBRD)	DTRA (ATD)	EM2P Other JPM's within the JPEO-CBD	TaCBRD will develop applications that will be integrated in into existing products. TaCBRD deliverables will also enhance the capabilities of other PMs within the JPEO-CBD.
Mission Assurance, Threat Alert, Disaster Resiliency and Response (MATADRR)	NORTHCOM (ATD)	Various (ARNORTH ONS)	Applications, CONOPS and TTPs developed through MATADRR will assist JPMG with the development of an architecture that allows Force Protection and Emergency Management systems to work together. MATADRR finished in June 2014.
Thermal Imagining Dual-use for Aerosol Monitoring Alarms and Security (TIDAMAS)	DTRA (ATD)	FPS/IBD (ECP BCEC) POM 18-22	TIDAMAS is a low cost effort that utilizes existing camera hardware with software upgrade to prove dual use for both physical security and chem/bio detection.
Enhanced Linear Detection (eLDS) as a sensor backbone	ERDC (ATD)	FPS (TSS) POM: 17-22	The ELDS will reduce troop to task and provide tremendous cost savings by making use of a single technology to meet the requirement of multiple technologies.
Modular Protective System (MPS)	ERDC	FPS/ IBD (RDPS : DRAFT)	The MPS is the 80% solution for the Remote Deployable Protective system (RDPS). The MPS is currently being used to inform the RDPS CDD.
Gatekeeper on the Move-Biometrics (GOTM-B)	CENTCOM (ATD)	FPS (ECP BCEC) POM: 18-22	GOTM-B will provide an integrated, 3D Multi-modal Biometric non-stop, ID on the move entry system which will validate entry credentials using biometrics.
Joint USFK Portal and Integrated Threat Recognition (JUPITR) ATD	JPEO-CBD	Multiple Programs across the JPEO-CBD	JUPITR Early Warning will integrate the fusion and automation technology and suit of force protection sensors with CB sensors to inform the CBRN enhancement package structure for IBD.

Interagency Collaborations and Activities

Activity	Office	Description
Interagency Detection QA/PT Program	DHS Office of Health Affairs(OHA)/ BioWatch & NSWC	Support DoD labs as a group/maintain control of the PT program for CALS/CSTs
CBP interactions/Interagency Summit	DHS CBP	A series of workshops and meetings to discuss emerging issues common to many Federal Agencies. Specific project collaborations on subjects such as equipment re-use, requirements generation, combined experimentation/demonstrations.
Biosurveillance (BSV) Information Exchange Limited Objective Experiment (LOE)	OHA/ BioWatch	Effort laid the baseline for communication needed between DOD, Installations and BioWatch jurisdictions
BioWatch Working Groups (NCR Core and FBWG)	DHS OHA BioWatch and other local and federal agencies	Situational awareness and invites to participate in local and national events
Interagency Board for Equipment Standardization and Interoperability	DHS (FEMA, BioWatch,)/ DOJ/DOD, other Federal	Networking and opportunities for shared expense for collaborative

Emerging S&T Projects and Opportunities

Project	Lead Agency	Brief Description
Homeland Integrated Biosurveillance Response Information Demonstration (HIBRID)	**DHS, DTRA**	Informs DoD Biosurveillance, Mission Assurance, Force Health Protection, and Integrated Base Defense missions. Leverages Homeland pilot to develop capability that can be transported OCONUS. Collaborative DoD and DHS program to integrate, demonstrate, and quantify the utility of information sources to make measurable improvements to decisions in response to biological events and incidents.
EUCOM Keystone	**ARDEC**	A joint initiative to significantly improve EUCOM's ability to share critical near real-time information across unclassified emergency management and force protection applications to Host Nation First Responders and geographically separated locations (GSLs). The objective of the EUCOM Keystone effort is to: • Execute OCONUS service/Host Nation tool demonstrations • Conduct proof of concept integration of OCONUS DOD to Host Nation systems, software and equipment • Perform a EUCOM Keystone Technical Demonstration to verify and validate systems operation

JOINT PROJECT MANAGER GUARDIAN

Joint Integrated Force Protection & Response Enabler

Follow & Engage with Us!

JPMGuardian

@JPMGuardian

‹ on the web

JPM-Guardian, COL James Choung james.k.choung.mil@mail.mil
Mr. Don Buley, Deputy JPM-Guardian donald.c.buley.civ@mail.mil